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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,383	04/27/2006	Holger Grote	2003P00812WOU'S	4720
22116 7590 12/24/2009 SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			EXAMINER WONGWIAN, PHUTTHIWAT	
			ART UNIT	PAPER NUMBER
			3741	
			MAIL DATE	DELIVERY MODE
			12/24/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/577,383

**Applicant(s)**

GROTE ET AL.

**Examiner**

PHUTTHIWAT WONGWAN

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 12-25 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 13 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/06)
- Paper No(s)/Mail Date 04/30/2008, 06/29/2009, 07/30/2009
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This office action is responsive the amendment filed on 09/01/2009. 12-25 are currently pending in this application.

### ***Election/Restrictions***

2. Applicant's election without traverse of species I claims 12-14 and 21 in the reply filed on 09/01/2009 is acknowledged. However, claims 14 reads on species III - Figure 4B, perforate lattice, therefore, claims 14-20 have been withdrawn from consideration as being non-elected species. Upon further consideration, claims 22-25 will be included with the elected species III,

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

**The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.**

4. The abstract of the disclosure is objected to because the term "The aim of the invention" should be changed. Correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informalities: the description of fig. 4a and 4b was not provided.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Hofmann (Pub. No. US 2003/0177770).
8. As to claim 12, Hofmann discloses a heat shield element, comprising: a basic body 11 (fig. 1) formed from a strengthened ceramic material (page 3, paragraph 0032, "the tension element is made of ceramic material"; and a reinforcing element 3 (fig. 1) contained within the basic body (fig. 1) that increases (inherent) the tensile strength of the heat shield element.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann in view of Holden (US Patent No. 3,918,255).
11. As to claims 22 and 24 Hofmann discloses an axial flow gas turbine engine (fig. 12) arranged about a central axis 37 (fig. 12), comprising: a rotor (fig. 12) rotationally mounted about the central axis of the engine; an intake housing (fig. 12, upstream from 39) that intakes air; a compressor section 39 (fig. 12) that compresses the intake air; and an annular combustion chamber 25 (fig. 12) that accepts the compressed air, introduces a fuel (fig. 12) and combusts the fuel and compressed air to provide a hot working fluid wherein the combustion chamber comprises: an annular combustion chamber wall 21 (fig. 12) having an inner surface 21 (fig. 12), and a plurality of heat shield elements 1 (fig. 12) arranged on the inner surface to form an inner lining 1 (fig. 12) comprising a basic body 11 (fig. 1) formed from a strengthened ceramic material (page 3, paragraph 0032, "the tension element is made of ceramic material"; and a reinforcing element 3 (fig. 1) contained within the basic body (fig. 1) that has greater tensile strength than tensile strength of the heat shield element.

Hofmann does not disclose that *a plurality of combustors arranged circumferentially through the combustion chamber wall.*

However, Holden teaches it is well known to use a plurality of combustors 10 (fig. 1A) arranged circumferentially through the combustion chamber wall (fig. 1A) in a gas turbine.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hofmann's invention such that *a plurality of combustors arranged circumferentially through the combustion chamber wall*, as suggested and taught by Holden, for the purpose of providing more uniform combustion in the combustor.

12. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann in view of Holden and Sasaki (US Patent No. 6,155,040).

13. As to claim 13, Hofmann discloses the essential features of the claimed invention except *the reinforcing element is formed from a ceramic composite material*.

However, Sasaki teaches it is well known to formed the reinforcing element of the heat shield from a ceramic composite material (col. 8, line 9-10, "the heat insulating portion 43 made of ceramic composite material").

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hofmann's invention such that *the reinforcing element is formed from a ceramic composite material*, as suggested and taught by Sasaki, for the purpose of increasing the strength of the ceramic.

14. Claims 21, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann in view of Holden and DeCorso (US Patent No. 4,787,208).

15. As to claims 21, 23 and 25, Hofmann discloses the essential features of the claimed invention except *the body is formed from a cast ceramic material*.

However, DeCorso teaches it is well known to form the combustor wall from a cast ceramic material (col. 3, 54-55, "The combustor wall surrounding the quench zone 54 comprises the metal jacket 30 encasing cast ceramic 56").

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hofmann's invention such that *the body is formed from a cast ceramic material*, as suggested and taught by DeCorso, for the purpose of improving the strength of the heat shield.

#### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUTTHIWAT WONGWIAN whose telephone number is 571-270-5426. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL A. CUFF can be reached on 571-272-6778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. W./

Examiner, Art Unit 3741

/Michael Cuff/

Supervisory Patent Examiner, Art Unit 3741